

CLAIMS

Please amend the claims as follows, where added material is underlined and material to be deleted is indicated by strikethrough font. This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) A method of delivering a denervating agent to a prostate gland, the method comprising:

inserting an imaging apparatus into a rectum of a patient, wherein the imaging apparatus has a longitudinal axis and includes a hole at the distal tip;

generating one or more images of the prostate gland via the imaging apparatus;

maneuvering a spring-loaded needle through the hole at the distal tip of the imaging apparatus through a rectal wall of the patient, wherein the needle extends out of the imaging apparatus parallel the longitudinal axis of the imaging apparatus;

positioning a distal end of the needle in proximity to the prostate gland based on the one or more images;

actuating a spring mechanism to cause the distal end of the needle to be inserted inserting the distal end of the needle into the prostate gland; and

delivering the denervating agent to the prostate gland via a lumen of the needle.

2. (Canceled)

3. (Original) The method of claim 1, wherein the imaging apparatus comprises an ultrasonic imaging device.

4. (Original) The method of claim 3, further comprising maneuvering the ultrasonic imaging device to generate the one or more images of the prostate gland.

5. (Original) The method of claim 1, wherein the denervating agent includes botulinum toxin.

6. (Currently amended) The method of claim 1, further comprising:
  - inserting the needle into the prostate gland at a first location by actuating the spring mechanism;
  - delivering a first dose of the denervating agent to the prostate gland via the lumen of the needle;
  - removing the distal end of the needle from the prostate gland at the first location;
  - positioning the distal end of the needle in proximity to a second location of the prostate gland based on the one or more images;
  - inserting the needle into the prostate gland at the second location by actuating the spring mechanism; and
  - delivering a second dose of the denervating agent to the prostate gland via the lumen of the needle.
7. (Original) The method of claim 6, further comprising:
  - removing the distal end of the needle from the prostate gland at the second location;
  - positioning the distal end of the needle in proximity to a third location of the prostate gland based on the one or more images;
  - inserting the needle into the prostate gland at the third location; and
  - delivering a third dose of the denervating agent to the prostate gland via the lumen of the needle.
8. (Original) The method of claim 7, further comprising:
  - removing the distal end of the needle from the prostate gland at the third location;
  - positioning the distal end of the needle in proximity to a fourth location of the prostate gland based on the one or more images;
  - inserting the needle into the prostate gland at the fourth location; and
  - delivering a fourth dose of the denervating agent to the prostate gland via the lumen of the needle.

9. (Original) The method of claim 8, wherein each of the doses comprise approximately 0.5 milliliter of botulinum toxin.

10. (Original) The method of claim 1, further comprising delivering the denervating agent from a denervating agent delivery assembly that includes a reservoir to hold the denervating agent and an actuator to cause the denervating agent to flow from the reservoir through the lumen, wherein a hub and a fluid line attaches the needle to the reservoir.

11. (Original) The method of claim 1, further comprising delivering the denervating agent from a denervating agent delivery assembly that includes a first reservoir that holds a substantial amount of the denervating agent, a second reservoir to hold a first discrete dose of the denervating agent and an actuator to cause the denervating agent to flow from the second reservoir through the lumen, wherein a hub attaches the needle to the second reservoir and the second reservoir refills with a second discrete dose of the denervating agent from the first reservoir following delivery of the first discrete dose.

12. (Currently amended) A system for delivering a denervating agent to a prostate gland comprising:

an imaging apparatus sized for insertion into a rectum of a patient to generate one or more images of a prostate gland, the imaging apparatus having a longitudinal axis and formed with a hole;

a spring-loaded needle positioned through the hole of the imaging apparatus for insertion through a rectal wall of the patient in proximity to the prostate gland based on the one or more images connected to a first actuator, the needle defining a lumen such that a denervating agent can be delivered to the prostate gland through the lumen, wherein the needle extends out of the imaging apparatus parallel the long axis of the imaging apparatus.

Claims 13-14 (Canceled)

15. (Original) The system of claim 12, further comprising a denervating agent delivery assembly coupled to the needle to deliver the denervating agent through the lumen.

16. (Currently amended) The system of claim 15, wherein the denervating agent delivery assembly includes a reservoir to hold the denervating agent and ~~an~~ a second actuator to cause the denervating agent to flow from the reservoir through the lumen.

17. (Original) The system of claim 16, wherein the second actuator comprises a plunger.

18. (Original) The system of claim 16, further comprising a hub and a fluid line to attach the needle to the reservoir.

19. (Original) The system of claim 15, wherein the denervating agent delivery assembly includes a first reservoir to hold a substantial amount of the denervating agent, a second reservoir to hold a discrete dose of the denervating agent, and an actuator to cause the denervating agent to flow from the second reservoir through the lumen, wherein the second reservoir refills with another discrete dose of the denervating agent from the first reservoir following actuation of the second actuator.

20. (Original) The system of claim 15, wherein the denervating agent delivery assembly includes an actuator, a pump and a reservoir, wherein upon actuation of the actuator the pump causes delivery of the denervating agent from the reservoir through the lumen.

21. (Original) The system of claim 12, wherein the denervating agent includes botulinum toxin.

22. (Original) The system of claim 12, wherein the imaging apparatus comprises an ultrasonic imaging apparatus.

23. (Original) The system of claim 12, wherein the needle includes a hyper-echoic coating.

24. (Currently amended) A system for delivering a denervating agent to a prostate gland comprising:

an imaging means for insertion into a rectum of a patient to generate one or more images of a prostate gland, the imaging apparatus having a longitudinal axis and formed with a hole;

a needle means positioned through the hole of the imaging apparatus for insertion through a rectal wall of the patient in proximity to the prostate gland based on the one or more images, the needle defining a lumen such that a denervating agent can be delivered to the prostate gland through the lumen, wherein the needle extends out of the hole in the imaging apparatus parallel the longitudinal axis of the imaging apparatus; and

means for spring-biassing the needle into the prostate gland.

Claims 25-26 (Cancelled).